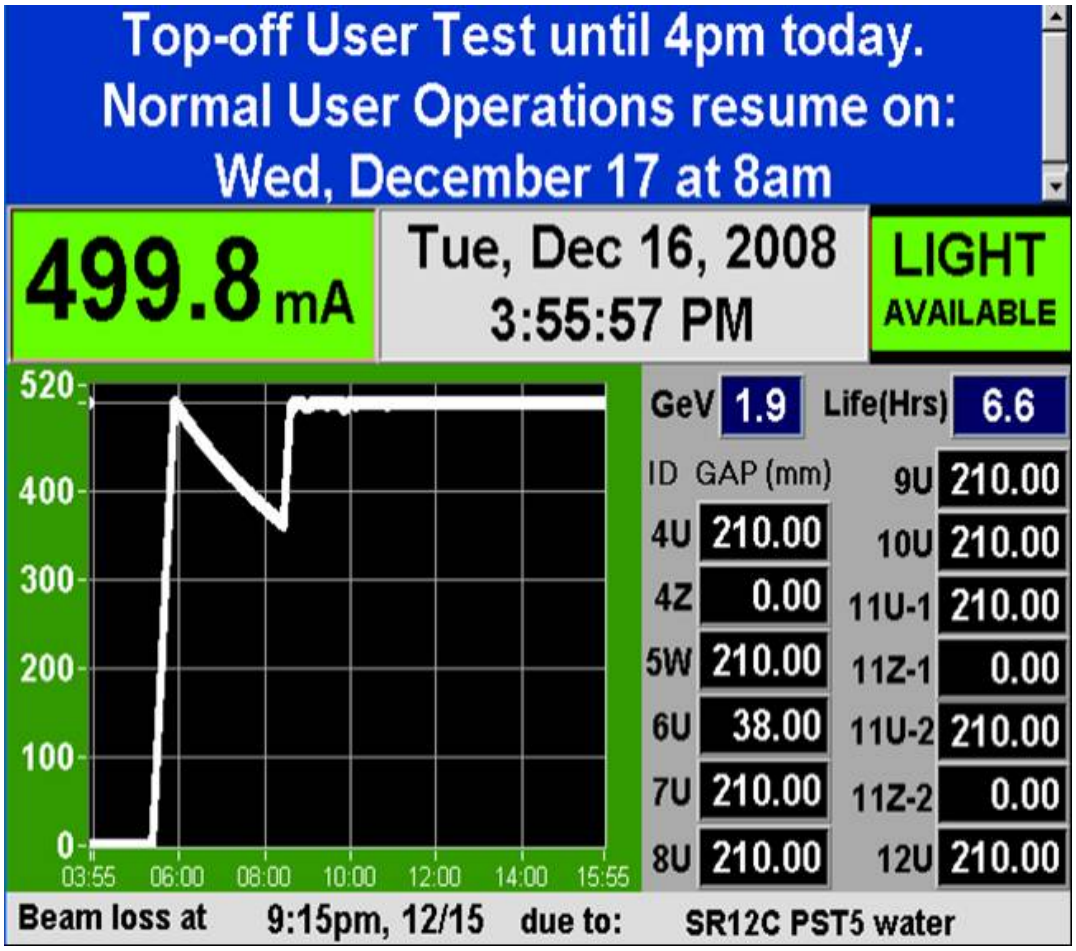
The ALS is upgrading to top-off operations. This means that instead of injecting more electrons into the storage ring every 8 hours after the total current has decayed to about 1/2, the plan is to inject current (top-off) every ~30 seconds and maintain an average beam current of 500 mA.

Top-off operation has many advantages compared to our present operational mode. We expect a twofold increase in the average current (see the Figure above). In addition, there will be further increases in the brightness—due to reduction of the beam size and the minimum gap of insertion devices—and improvements in the thermal stability of the storage ring and beamline components.

The booster ring has been upgraded to run at 1.9 GeV for full-energy injection, and since August 2008 the ALS has been injecting to 500 mA. Top-off authorization and readiness reviews were completed in October 2008. Beamlines are being approved for top-off operations (the infrared beamlines are approved), and initial tests with beamline shutters open will begin in November 2008. The plan is to transition to top-off operations for users in January 2009.


Top-off User Test until 4pm today.
Normal User Operations resume on:
Wed, December 17 at 8am
499.8 mA
Tue, Dec 16, 2008
3:55:57 PM
LIGHT
AVAILABLE
520
400
300
200
100
0
03:55
06:00
08:00
10:00
12:00
14:00
15:55
GeV 1.9
Life(Hrs) 6.6
ID GAP (mm)
4U 210.00
4Z 0.00
5W 210.00
6U 38.00
7U 210.00
8U 210.00
9U 210.00
10U 210.00
11U-1 210.00
11Z-1 0.00
11U-2 210.00
11Z-2 0.00
12U 210.00
Beam loss at 9:15pm, 12/15 due to: SR12C PST5 water